

## A NEW SPECIES OF *AMPHINEMURA* (PLECOPTERA: NEMOURIDAE) FROM CHINA<sup>1</sup>

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ABSTRACT: *Amphinemura elongata*, a new species of Nemouridae (Plecoptera) from China is described. Remarks on relationships with the closest species, *A. fleurdelia* Wu, are given.

KEY WORDS: Plecoptera, Nemouridae, *Amphinemura*, New species, China

The genus *Amphinemura* Ris belongs to the subfamily Amphinemurinae, and is distributed in the Holarctic and Oriental regions. It currently contains 124 known species worldwide, including 37 from China. The species of *Amphinemura* from China were studied mainly by Wu (1938, 1962, 1973) and Zhu and Yang (2002, 2003). In the present paper, we describe one new species. Morphological terminology follows that of Baumann (1975). The type of new species are deposited in the Entomological Museum of China Agricultural University (CAU), Beijing.

### *Amphinemura elongata*, NEW SPECIES (Figs. 1-5)

**Diagnosis:** Tergum 9 distinctly constricted medially. Epiproct in dorsal view with one pair of spine-like lateral processes distinctly shorter than median process, and single median process slightly curved upward at tip. Median lobe of paraproct strongly spiral; outer lobe long and thin.

**Male:** Body length 5.2 mm; forewing length 6.5 mm, hindwing length 5.0 mm. Head dark brown; antennae yellowish brown; mouthparts dark brown. Thorax brown; wings hyaline; legs yellowish brown. Abdomen brownish yellow; hypoproct including cerci brownish yellow; hairs on abdomen mostly pale.

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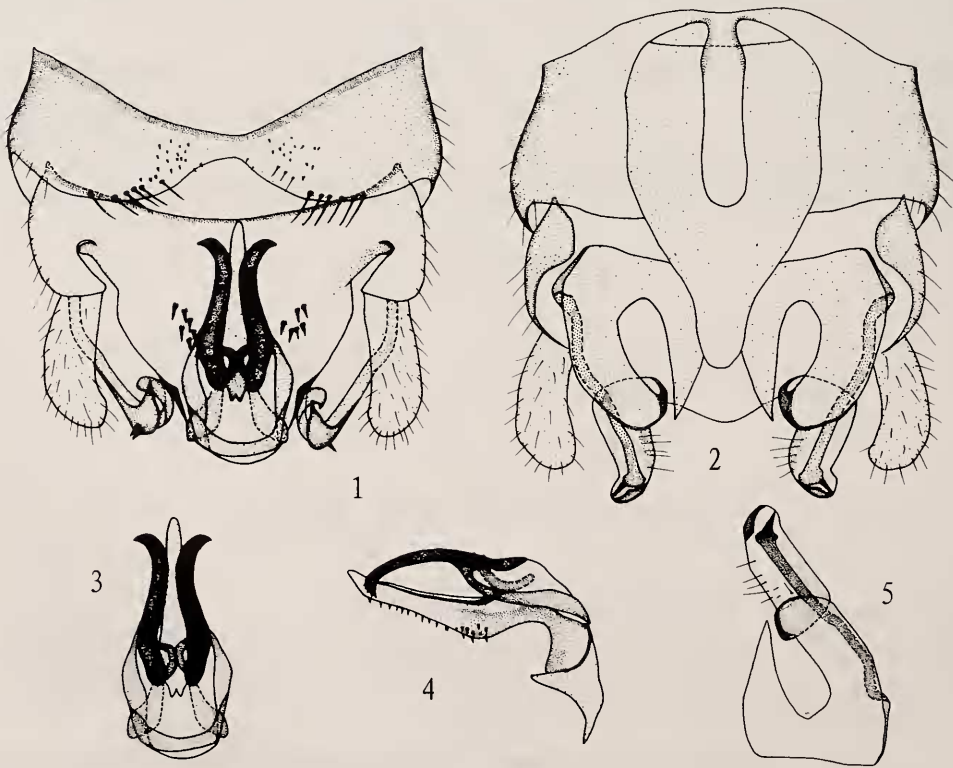
Genitalia (Figs. 1-5): Tergum 9 weakly sclerotized except basal margin distinctly sclerotized, rather constricted medially, with large triangular mid-anterior incision and distinct mid-posterior incision, and with a few dark long hairs along posterior margin and two groups of black tiny spines at the middle. Sternum 9 with slender vesicle slightly constricted medially; hypoproct rather wide basally, then distinctly tapering toward tip, elongated upward to base of epiproct. Tergum 10 weakly sclerotized except basal margin distinctly sclerotized, with a large median concavity bearing 6 black spines closely located along mid-lateral margin of the concavity. Cercus membranous, long and nearly cylindrical. Epiproct divided into one pair of strongly sclerotized and long spine-like lateral processes with tiny spines apically and single sclerotized median process slightly curved upward apically with ventral tiny spines along keel-like ventral sclerite. Paraproct divided into three lobes: outer lobe rather long and thin, heavily sclerotized, nearly as long as median lobe, curved inward medially, and with one or two small spines at the tip; median lobe spiral and partly sclerotized with a sharp spine; inner lobe triangular, weakly sclerotized, much shorter than outer lobe, with acute tip.

**Female:** Unknown.

**Holotype male, Zhejiang:** Qingyuan, Baishanzu Mountain, Wulingkeng, 1994. IV. 22, H. Wu.

**Distribution:** China (Zhejiang).

**Etymology:** The specific name refers to the long outer lobe of paraproct.



Figs. 1-5. *Amphinemura elongata* sp.n. (male). 1. Terminalia, dorsal. 2. Terminalia, ventral. 3. Epiproct, dorsal. 4. Epiproct, lateral. 5. Right paraproct.

**Remarks:** The new species is closely related to *A. fleurdelia* (Wu) described from Fujian and also recorded in Guangdong, but may be separated from the latter in the following features: spine-like lateral processes of epiproct distinctly shorter than median process and with tiny spines at tip, median process curved upward at tip; median lobe of paraproct strongly spiral, outer lobe rather long and thin. In *A. fleurdelia*, the lateral process of epiproct is nearly as long as the median process which is curved downward in an angle and has no tiny spines at tip; the median lobe of paraproct is not spiral, the outer lobe is rather short (Figs. 6-10).

***Amphinemura fleurdelia* (Wu) (Figs. 6-10)**

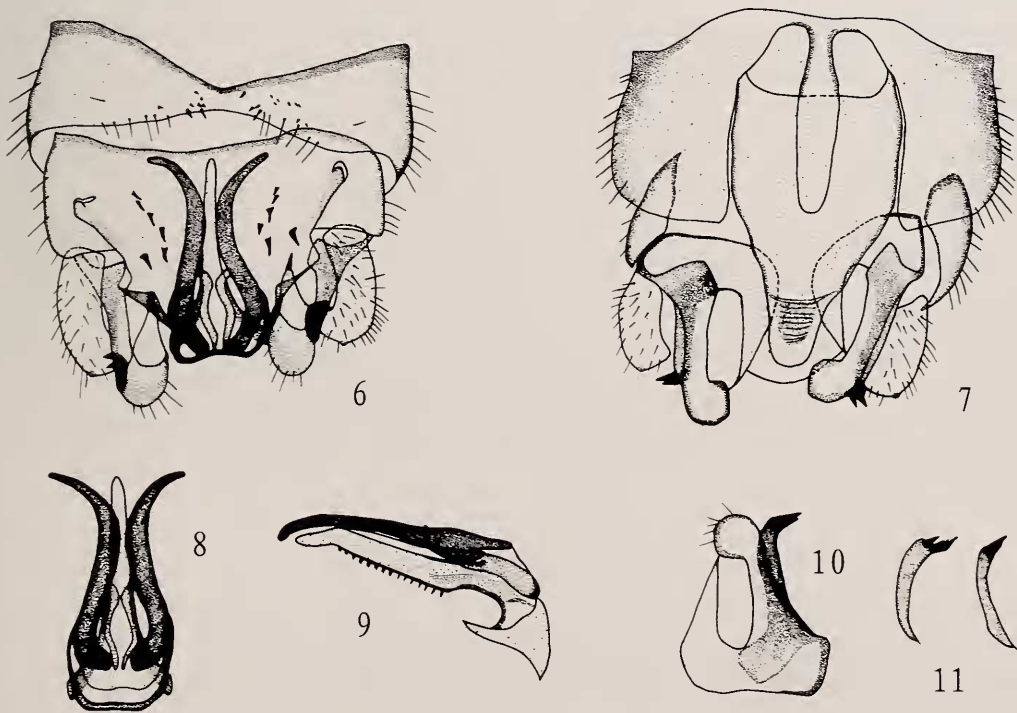
*Nemoura (Protonemoura) fleurdelia* Wu, 1949, Peking Nat. Hist. Bull. 17: 253.

**Type locality:** Ta-chu-luan, Shao-wu, Fukien.

**Diagnosis:** Tergum 9 distinctly constricted medially. Epiproct with one pair of long spine-like lateral processes nearly as long as median process, and single median process slightly curved downward apically in an angle. Median lobe of paraproct strongly curved inward but not spiral and outer lobe short.

**Specimens examined:** 1 male, Guangdong, Ruyuan, Nanling National Natural Reserve, 2003. III. 26, D. Yang; 2 males, Guangdong, Yingde, Shimentai National Forest Garden, 2003. III. 28, D. Yang.

**Distribution:** China (Fujian, Guangdong).



Figs. 6-11. *Amphinemura fleurdelia* (Wu) (male). 6. Terminalia, dorsal. 7. Terminalia, ventral. 8. Epiproct, dorsal. 9. Epiproct, lateral. 10. Right paraproct. 11. Variation of right outer lobe of paraproct.

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